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EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/941,711	KUWATA ET AL.	
	Examiner	Art Unit	
	James A. Thompson	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 July 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) _____ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-71* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 August 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *7/25/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Firstly, with regard to page 21, lines 6-11 of Applicant's arguments, dated 25 July 2005, Examiner has fully considered the new Information Disclosure Statement provided and has entered the initialed and signed copy into the record.

2. Applicant's arguments filed 25 July 2005 have been fully considered but they are not persuasive. Applicant's arguments are based on the present amendments to the claims. Therefore, rejections of the present claims are discussed below. The new grounds of rejection given below have been necessitated by the present amendments to the claims.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-2, 5-11, 18-21, 26-29, 52-54, 57-65, 67 and 69-71 are rejected under 35 U.S.C. 102(b) as being anticipated by Shiota (US Patent 6,011,547).

Regarding claims 1, 18 and 26: Shiota discloses an image data generating apparatus (figure 1 of Shiota) comprising an image data generating mechanism (figure 1(1) of Shiota) configured to generate image data (column 3, lines 58-61 of Shiota); an image process control information obtaining

mechanism (figure 1(2) and column 3, line 66 to column 4, line 4 of Shiota) configured to obtain image process control information (figure 1(9,10) of Shiota) that designates image process conditions for the generated image data at an output apparatus (column 5, lines 54-62 of Shiota), wherein the image process control information is determined according to a combination of an image generating characteristic of said image data generating apparatus (figure 1(9) and column 4, lines 1-7 and lines 11-12 of Shiota) and reproduction characteristics of the output apparatus (figure 1(10) and column 5, lines 57-67 of Shiota); and an output mechanism (figure 1(12) of Shiota) configured to output the generated image data associated with the obtained image process control information (column 5, lines 47-49 of Shiota). The recording information (figure 1(9) of Shiota) comprises information such as the gamma property of the camera (column 4, lines 1-9 of Shiota) and the contents of the AE processing (column 4, lines 10-18 of Shiota), and is thus clearly image generating characteristics of said image data generating mechanism. The processing condition (figure 1(10) of Shiota) comprises information about the characteristics of the output device (column 5, lines 57-67 of Shiota), and is thus clearly the reproduction characteristics of the output apparatus.

Further regarding claim 18: The mechanisms of claim 1 provide the means of claim 18

Further regarding claim 26: The apparatus of claim 1 performs the steps of the method of claim 26.

Regarding claim 5: Shiota discloses that the image process control information contains information for controlling the

reproduction characteristics of the image data at the output apparatus (column 5, lines 44-53 of Shiota).

Regarding claim 6: Shiota discloses that the image process control information includes gamma correction information (column 4, lines 5-10 of Shiota).

Regarding claim 7: Shiota discloses that said image process control information further comprises additional information that is correlated to said image data, said additional information including at least one of color space information, contrast information (γ property) (column 4, lines 7-9 of Shiota), color balance information (column 5, lines 12-18 of Shiota), sharpness information (sharp impression or soft impression) (column 4, lines 26-28 of Shiota), color correction information (column 4, lines 48-53 of Shiota), shadow point information, highlight point information, brightness correction information (column 4, lines 18-20 of Shiota), and highlight color information.

Regarding claim 8: Shiota discloses an optional image process condition obtaining mechanism configured to obtain an optional image process condition set by a user (column 4, lines 21-30 of Shiota). If a user can set an optional image process condition (column 4, lines 21-30 of Shiota), then some form of optional image process condition obtaining mechanism is inherent.

Shiota further discloses an image control information adding mechanism (figure 1(6) of Shiota) configured to add the obtained optional image process condition to the image process control information (column 5, lines 28-32 of Shiota), wherein the image process control information obtaining mechanism obtains the image process control information to which the

optional image process condition is added (column 5, lines 23-32 of Shiota).

Regarding claim 9: Shiota discloses a storage mechanism that is configured to hold therein the image process control information (column 5, lines 31-35 of Shiota), wherein said image process control information obtaining mechanism is configured to obtain said image process control information from said storage mechanism (column 5, lines 40-44 of Shiota). The image process control information obtaining mechanism (figure 1 (2) of Shiota) obtains the image process control information for use with the output device (column 5, lines 40-44 of Shiota) from a built-in memory or card memory (column 5, lines 31-35 of Shiota), said built-in memory or card memory being the storage mechanism.

Regarding claim 10: Shiota discloses a data transfer mechanism (figure 1(2→3) of Shiota) configured to transmit the image data and the image process control information (column 5, lines 40-44 and lines 54-57 of Shiota). In order for the image data and image process control data to be transferred to the output device, some form of data transfer mechanism is inherent. Otherwise, there is no means by which the output device will be able to obtain the image data and process control data.

Regarding claim 11: Shiota discloses that the image generating apparatus is at least one of a digital still camera (column 3, lines 58-61 of Shiota), a digital video camera, and a scanning device.

Regarding claim 19: Shiota discloses that each of said means for generating image data, means for obtaining image process control information, and means for generating an output

is a computer program product having computer readable instructions (column 6, lines 3-9 of Shiota).

Regarding claim 27: Shiota discloses that said steps of generating image data, obtaining image process control information, and generating an output are computer-implemented process steps (column 6, lines 3-9 of Shiota).

Regarding claims 2, 20 and 28: Shiota discloses that the image process control information (figure 1(9,10) of Shiota) and the generated image data (figure 1(8) of Shiota) are contained in one output file (figure 1(7) and column 5, lines 31-35 of Shiota).

Regarding claims 52 and 57: Shiota discloses an apparatus (figure 1 of Shiota) comprising a processor (column 6, lines 3-9 of Shiota); means (figure 1(2) of Shiota) for retrieving an image file (figure 1(7) of Shiota) and providing the image file to the processor (column 5, lines 41-44 of Shiota), said image file including the image data (figure 1(8) of Shiota), and image process control information (figure 1(9,10) of Shiota) that designates image process conditions for the retrieved image data at an output apparatus (column 5, lines 54-62 of Shiota), wherein the image process control information is determined according to a combination of an image generating characteristic of an image data generating apparatus (figure 1(9) and column 4, lines 1-7 and lines 11-12 of Shiota) and reproduction characteristics of the output apparatus (figure 1(10) and column 5, lines 57-67 of Shiota), wherein said processor includes means for processing said image data using the image data and the image process control information (column 6, lines 3-9 of Shiota).

Further regarding claim 57: The apparatus of claim 52 performs the method of clam 57.

Regarding claims 53 and 58: Shiota discloses that the image file (figure 1(7) of Shiota) includes said image process control data (figure 1(9,10) of Shiota) and said image data (figure 1(8) of Shiota) in a single file (column 5, lines 54-59 of Shiota).

Regarding claim 59: Shiota discloses that the processing step includes processing of the image data at the output apparatus (column 5, lines 44-53 of Shiota).

Regarding claims 21, 29, 54 and 60: Shiota discloses that the image process control information includes gamma correction information (column 4, lines 5-10 of Shiota).

Regarding claim 61: Shiota discloses an image segment (figure 1(7) of Shiota) containing the image data to be processed (figure 1(8) and column 5, lines 31-35 of Shiota); and an image processing control segment (figure 1(9,10) of Shiota) containing the image processing control data for controlling the output apparatus to perform image processing on said image data using the image data and the image processing control data (column 5, lines 54-61 of Shiota), and wherein the image processing control data includes image process control information (figure 1(9,10) of Shiota) that designates image process conditions for the image data at the output apparatus (column 5, lines 54-59 of Shiota), and wherein the image process control information is determined according to a combination of an image generating characteristic of the image data generating apparatus (figure 1(9) and column 4, lines 1-7 and lines 11-12 of Shiota) and reproduction characteristics of the output apparatus (figure 1(10) and column 5, lines 57-67 of Shiota).

Regarding claim 62: Shiota discloses a computer program product (column 6, lines 3-9 of Shiota) comprising a computer storage medium (column 5, lines 31-34 of Shiota); and a computer program code stored in the computer storage medium for implementing an image processing on the computer (column 6, lines 3-9 of Shiota), the computer program code having a first computer code configured to retrieve image data (figure 1(7) and column 5, lines 41-44 of Shiota) and image process control data (figure 1(9,10) of Shiota) associated with the image data (column 5, lines 54-59 of Shiota), wherein the image processing control data includes image process control information (figure 1(9,10) of Shiota) that designates image process conditions for the image data at the output apparatus (column 5, lines 54-59 of Shiota), and wherein the image process control information is determined according to a combination of an image generating characteristic of an image data generating apparatus (figure 1 (9) and column 4, lines 1-7 and lines 11-12 of Shiota) and reproduction characteristics of the output apparatus (figure 1 (10) and column 5, lines 57-67 of Shiota), and a second computer code configured to perform image processing on the image data using the image data and the image process control information, if the image process control data is retrieved (column 5, lines 54-61 of Shiota).

Regarding claim 63: Shiota discloses a third computer code configured to perform image data processing on the image data using the predetermined image process control data, if the image process control data is not retrieved (column 5, lines 54-59 of Shiota), wherein the predetermined image process control data is configured to general purpose image processing (column 4, lines 54-59 of Shiota). If no correction processing is designated

(column 4, lines 54-59 of Shiota), then clearly all that is left to be performed is general purpose image processing.

Regarding claims 64 and 67: Shiota discloses an image data processing system (figure 1 of Shiota) comprising an image data generating device (figure 1(1) of Shiota) configured to generate image data (column 3, lines 58-61 of Shiota); an image process control information obtaining mechanism (figure 1(2(portion)) and column 3, line 66 to column 4, line 4 of Shiota) configured to obtain image process control information (figure 1(9,10) of Shiota) that designates image process conditions for the image data at an output apparatus (column 5, lines 54-59 of Shiota), wherein the image process control information is determined according to a combination of an image generating characteristic of said image data generating apparatus (figure 1(9) and column 4, lines 1-7 and lines 11-12 of Shiota) and reproduction characteristics of the output apparatus (figure 1(10) and column 5, lines 57-67 of Shiota); an output mechanism (figure 1(11) of Shiota) configured to output the generated image data associated with the obtained image process control information in an output file (column 5, lines 54-59 of Shiota); a processor (column 6, lines 3-9 of Shiota); and a data retrieval mechanism (figure 1(2 (portion)) of Shiota) configured to retrieve said output file and provide the output file to the processor (column 5, lines 40-44 of Shiota), wherein said processor is configured to perform image processing on said image data (column 6, lines 3-9 of Shiota) using the image data and the image process control information (column 5, lines 54-59 of Shiota). The image process control information obtaining mechanism and the data retrieval mechanism are the corresponding portions of the software embodied on the image server (figure 1(2) of Shiota)

that perform the functions of said output process control information obtaining mechanism and said data retrieval mechanism.

Further regarding claim 67: The mechanisms of claim 64 provide the means of claim 67.

Regarding claim 65: Shiota discloses that all of the image processing is performed on a personal computer (column 6, lines 3-9 of Shiota). Therefore, Shiota further discloses a personal computer that contains said processor and said data retrieval mechanism.

Regarding claim 69: Shiota discloses an image data generating module (figure 1(1) of Shiota) configured to generate image data of a subject by photoelectric conversion (column 3, lines 58-61 of Shiota); a storage module (figure 1(2) of Shiota) configured to store image process control information (figure 1 (9,10) of Shiota) that is determined according to an output result of the generated image data at an output apparatus (column 5, lines 54-61 of Shiota), the image process control information designating an image processing condition for image data that is output to the output apparatus (column 5, lines 63-67 of Shiota); an image process control information obtaining module (figure 1(3) of Shiota) configured to obtain the image process control information from the storage module (column 5, lines 44-46 and lines 50-53 of Shiota); and an output module (figure 1(14) of Shiota) configured to output the generated image data associated with the obtained image process control information (column 5, lines 44-49 of Shiota).

Regarding claim 70: Shiota discloses that the image generating apparatus includes a digital still camera (figure 1 (1) and column 3, lines 58-63 of Shiota).

Regarding claim 71: Shiota discloses an image generating module (figure 1(1) of Shiota) that generates image data (column 3, lines 58-63 of Shiota); an image process control information obtaining module (figure 1(2) of Shiota) that obtains image process control information (figure 1(9,10) and column 5, lines 54-59 of Shiota), wherein the image process control module is determined according to a combination of image generating characteristics of the digital still camera (figure 1(9) and column 5, lines 31-35 of Shiota) and reproducing characteristics of an output apparatus (figure 1(10) and column 5, lines 57-62 of Shiota), wherein the image process control information designates an image processing condition for the image data that is output to the output apparatus (column 5, lines 54-61 of Shiota); and an output module (figure 1(14) of Shiota) that outputs the generated image data associated with the obtained image process control information (column 5, lines 44-49 of Shiota).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shiota (US Patent 6,011,547) in view of Liu (US Patent 6,523,046 B2).

Regarding claim 3: Shiota does not disclose expressly that said output file is an Exif file.

Liu discloses using an Exif file to store images (figure 2 (212("EXIF")) and column 9, lines 58-67 of Liu).

Shiota and Liu are combinable because they are from similar problem solving areas, namely storing and using digital image data. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use an Exif file format as the output file format. The suggestion for doing so would have been that an Exif file is simply one of many possible formats that one of ordinary skill in the art could select as an output file format (column 8, lines 4-9 of Liu). Therefore, it would have been obvious to combine Liu with Shiota to obtain the invention as specified in claim 3.

Further regarding claim 4: Liu discloses that the image process control information is stored at a Makernote portion of the Exif file (column 10, lines 17-21 of Liu).

7. Claims 12-17, 22-25, 30-36, 47-51 and 55-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shiota (US Patent 6,011,547) in view of Telle (US Patent 5,105,266).

Regarding claims 12, 22, 30 and 34: Shiota discloses an image data generating apparatus (figure 1 of Shiota) comprising an image data generating mechanism (figure 1(1) of Shiota) configured to generate image data of a subject (column 3, lines 58-61 of Shiota); a first obtaining mechanism (figure 1(2 (portion)) of Shiota) configured to obtain first information reflecting image generating characteristics of the image data generating mechanism (column 4, lines 1-7 and lines 11-12 of Shiota); a second image obtaining mechanism (figure 1(2

(portion)) of Shiota) configured to obtain second information reflecting reproduction characteristics of an output apparatus that outputs an image according to image data that is input from the image data generating mechanism (column 5, lines 54-62 of Shiota), the second information designates an optional image quality adjustment process to image data that is output to the output apparatus (column 4, lines 21-30 of Shiota); and an output mechanism (figure 1(12) of Shiota) configured to output the generated image data associated with image process control information (column 5, lines 47-49 of Shiota) including at least one of the first information and the second information (column 5, lines 54-59 of Shiota). The first and second image obtaining mechanisms are the corresponding portions of the software embodied on the image server (figure 1(2) of Shiota) that obtain said first and second information.

Shiota does not disclose expressly that said first information is used in color conversion to an absolute color space.

Telle discloses converting colors from one color space to an absolute color space (figure 4(78) and column 5, lines 28-33 of Telle). RGB colors are converted to CIELab color space, which is generally considered an absolute color space since CIELab color space is linear with respect to human visual color tolerance errors (column 5, lines 57-62 of Telle).

Shiota and Telle are combinable because they are from the same field of endeavor, namely the control, processing and output of digital color image data signals. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to convert the colors of the input device into an absolute color space, as taught by Telle, using said first

information taught by Shiota. The motivation for doing so would have been that an absolute color space is based on human visual attributes rather than device attributes, and can therefore be used as a standard for conversion. Therefore, it would have been obvious to combine Telle with Shiota to obtain the invention as specified in claims 12, 22, 30 and 34.

Further regarding claim 22: The mechanisms of claim 12 provide the means of claim 22.

Further regarding claim 30: The apparatus of claim 12 performs the method of claim 30.

Further regarding claim 34: The apparatus of claim 12 provide the propagated data signals of claim 34.

Regarding claims 13, 23 and 31: Shiota discloses that the image data, the first information, and the second information are contained in one image file (figure 1(7) and column 5, lines 31-35 of Shiota).

Regarding claim 17: Shiota discloses that the image generating apparatus is at least one of a digital still camera (column 3, lines 58-61 of Shiota), a digital video camera, and a scanning device.

Regarding claims 47 and 55: Shiota discloses an apparatus (figure 1 of Shiota) comprising a processor (column 6, lines 3-9 of Shiota); a data retrieval mechanism (figure 1(2) of Shiota) configured to retrieve the image file (figure 1(7) of Shiota) and provide the image file to the processor (column 5, lines 40-44 of Shiota), said image file including first information reflecting image generating characteristics of an image data generating apparatus (column 4, lines 1-7 and lines 11-12 of Shiota); second information reflecting reproduction characteristics of an output apparatus that outputs an image

according to image data that is input from an image data generating apparatus (column 5, lines 54-62 of Shiota), the second information designates an optional image quality adjustment process to image data that is output to the output apparatus (column 4, lines 21-30 of Shiota); wherein said processor is configured to implement a first reproduction mechanism configured to perform image processing on said image data with said first information (column 5, lines 54-57 of Shiota), and a second reproduction mechanism configured to perform a reproduction process specified for said image data based on said second information (column 5, lines 57-61 of Shiota); and an image data output mechanism (figure 1(12) of Shiota) configured to output the image data after said image data has been processed by said first reproduction and said second reproduction mechanisms (column 5, lines 44-50 of Shiota).

Shiota does not disclose expressly that said first information is used in color conversion to an absolute color space.

Telle discloses converting colors from one color space to an absolute color space (figure 4(78) and column 5, lines 28-33 of Telle). RGB colors are converted to CIELab color space, which is generally considered an absolute color space since CIELab color space is linear with respect to human visual color tolerance errors (column 5, lines 57-62 of Telle).

Shiota and Telle are combinable because they are from the same field of endeavor, namely the control, processing and output of digital color image data signals. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to convert the colors of the input device into

an absolute color space, as taught by Telle, using said first information taught by Shiota. The motivation for doing so would have been that an absolute color space is based on human visual attributes rather than device attributes, and can therefore be used as a standard for conversion. Therefore, it would have been obvious to combine Telle with Shiota to obtain the invention as specified in claims 47 and 55.

Further regarding claim 55: The mechanisms of the apparatus of claim 47 provide the means of the apparatus of claim 55.

Regarding claims 14, 24, 32, 35, 48 and 56: Shiota discloses that said first information includes at least one of gamma correction information (column 4, lines 5-9 of Shiota), color space information (column 4, lines 46-53 of Shiota), and negative image data value information.

Regarding claims 15 and 49: Shiota discloses that the second information includes at least one of an image correction characteristic associated with generating a print data from an image data (column 5, lines 54-61 of Shiota).

Regarding claims 16, 25, 33, 36 and 50: Shiota discloses that said second information includes at least one of contrast information (γ property) (column 4, lines 7-9 of Shiota), color balance information (column 5, lines 12-18 of Shiota), sharpness information (sharp impression or soft impression) (column 4, lines 26-28 of Shiota), stored color correction information (column 4, lines 48-53 of Shiota), shadow point information, highlight point information, saturation information, and brightness correction information (column 4, lines 18-20 of Shiota).

Regarding claim 51: Shiota discloses that said predetermined output apparatus is a printer (figure 1(12) and column 5, lines 44-49 of Shiota).

8. Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shiota (US Patent 6,011,547) in view of Telle (US Patent 5,105,266) and Liu (US Patent 6,523,046 B2).

Regarding claim 37: Shiota discloses that said image data and said image process control data are included as part of a single file that is embodied in said propagated data signal (figure 1(7-10) and column 5, lines 31-35 of Shiota).

Shiota in view of Telle does not disclose expressly that said file is specifically in the Exif file format.

Liu discloses using an Exif file to store images (figure 2 (212("EXIF")) and column 9, lines 58-67 of Liu).

Shiota in view of Telle is combinable with Liu because they are from similar problem solving areas, namely storing and using digital image data. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use an Exif file format as the file format for the single file containing the image data and process data. The suggestion for doing so would have been that an Exif file is simply one of many possible formats that one of ordinary skill in the art could select as an output file format (column 8, lines 4-9 of Liu). Therefore, it would have been obvious to combine Liu with Shiota in view of Telle to obtain the invention as specified in claim 37.

9. Claims 38-42 and 44-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shiota (US Patent 6,011,547) in view of Kondo (US Patent 6,281,992 B1).

Regarding claim 38: Shiota discloses an apparatus (figure 1 of Shiota) comprising a processor (column 6, lines 3-9 of Shiota); a data retrieval mechanism (figure 1(2) and column 3, line 66 to column 4, line 4 of Shiota) configured to retrieve the image data (figure 1(8) of Shiota) and image process control data (figure 1(9,10) of Shiota) associated with the image data (column 5, lines 31-35 of Shiota), wherein the image process control data contains image process control information (figure 1(9,10) of Shiota) that designates image process conditions for the retrieved image data at an output apparatus (column 5, lines 54-62 of Shiota), wherein the image process control information is determined according to a combination of an image generating characteristic of said image data generating apparatus (figure 1 (9) and column 4, lines 1-7 and lines 11-12 of Shiota) and reproduction characteristics of the output apparatus (figure 1 (10) and column 5, lines 57-67 of Shiota); a first data providing mechanism (figure 1(6) of Shiota) configured to provide the image data (figure 1(8) of Shiota) and the image process control data for the image generating apparatus (figure 1(9) of Shiota) (column 5, lines 29-35 of Shiota); and second data provide mechanism (figure 1(11) of Shiota) configured to provide the process control data for the output apparatus (figure 1(10) and column 5, lines 54-59 of Shiota); and wherein said processor is configured to perform image processing on said image data using the image data and the image process control information (column 6, lines 3-9 of Shiota).

Shiota does not disclose expressly that said first data provide mechanism and said second data provide mechanism are a single mechanism.

Kondo discloses a single data provide mechanism (figure 1 (14) of Kondo) that provides process control data (column 4, lines 31-41 of Kondo) based on the image generating apparatus (figure 1(12) of Kondo) and the predetermined output apparatus (figure 1(16) of Kondo) (column 4, lines 53-56 of Kondo).

Shiota and Kondo are combinable because they are from the same field of endeavor, namely digital image data processing and reproduction. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to provide all of the process control data from a single device which correlates the image generating apparatus and the predetermined output apparatus, as taught by Kondo. The motivation for doing so would have been to provide for stability in the quality of reproduced images given a plurality of different input and output devices (column 2, lines 26-36 of Kondo). Therefore, it would have been obvious to combine Kondo with Shiota to obtain the invention as specified in claim 38.

Regarding claim 39: Shiota discloses that, if the process control data is not retrieved, the data providing mechanism provides the image data and a predetermined image process control data to the processor (column 5, lines 54-59 of Shiota), and wherein the predetermined image process control data is configured to general purpose image processing (column 4, lines 54-59 of Shiota). If no correction processing is designated (column 4, lines 54-59 of Shiota), then clearly all that is left to be performed is general purpose image processing.

Regarding claim 40: Shiota discloses that said processor is hosted in a computer (column 6, lines 3-5 of Shiota).

Regarding claim 41: Shiota discloses that said output apparatus is a printer (figure 1(12) and column 5, lines 44-49 of Shiota).

Regarding claim 42: Shiota discloses that said image process control data (figure 1(9,10) of Shiota) and said image data (figure 1(8) of Shiota) are contained in a single file (figure 1(7) and column 5, lines 54-59 of Shiota).

Regarding claim 44: Shiota discloses that the image process control information contains information for controlling the reproduction characteristics of the image data at the output apparatus (column 5, lines 44-53 of Shiota).

Regarding claim 45: Shiota discloses that the image process control information includes gamma correction information (column 4, lines 5-10 of Shiota).

Regarding claim 46: Shiota discloses that said image process control information further comprises additional information that is correlated to said image data, said additional information including at least one of color space information, contrast information (γ property) (column 4, lines 7-9 of Shiota), color balance information (column 5, lines 12-18 of Shiota), sharpness information (sharp impression or soft impression) (column 4, lines 26-28 of Shiota), color correction information (column 4, lines 48-53 of Shiota), shadow point information, highlight point information, brightness correction information (column 4, lines 18-20 of Shiota), and highlight color information.

10. Claims 66 and 68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shiota (US Patent 6,011,547) in view of Telle (US Patent 5,105,266) and Kondo (US Patent 6,281,992 B1).

Regarding claims 66 and 68: Shiota discloses an image data processing system (figure 1 of Shiota) comprising an image generating apparatus (figure 1(1) of Shiota) including an image data generating mechanism (figure 1(1) of Shiota) configured to generate image data of a subject (column 3, lines 58-60 of Shiota) and store said image data in an image file (column 5, lines 31-35 of Shiota).

Shiota further discloses a first obtaining mechanism (figure 1(2(portion)) of Shiota) configured to obtain first information reflecting image generating characteristics of the image data generating mechanism (column 4, lines 1-7 and lines 11-12 of Shiota); a second image obtaining mechanism (figure 1(2 (portion)) of Shiota) configured to obtain second information reflecting reproduction characteristics of an output apparatus that outputs an image according to image data that is input from the image data generating mechanism (column 5, lines 54-62 of Shiota), the second information designates an optional image quality adjustment process to image data that is output to the output apparatus (column 4, lines 21-30 of Shiota).

Shiota further discloses an image processing apparatus (figure 1(2) of Shiota) including a processor (column 6, lines 3-9 of Shiota); a data retrieval mechanism (figure 1(2) of Shiota) configured to retrieve said generated image data, said first information, and said second information (figure 1(7) of Shiota) and provide said generated image data, said first information, and said second information to the processor (column 5, lines 40-44 of Shiota), wherein said processor is

configured to implement a first reproduction mechanism configured to perform image processing on said image data with said first information (column 5, lines 54-57 of Shiota), and a second reproduction mechanism configured to perform a reproduction process specified for said image data based on said second information (column 5, lines 57-61 of Shiota); and an image data output mechanism (figure 1(12) of Shiota) configured to output the image data after said image data has been processed by said first reproduction and said second reproduction mechanisms (column 5, lines 44-50 of Shiota).

Shiota discloses that said image data generating mechanism contains a digital processor (figure 1(5) and column 3, lines 58-61 of Shiota).

Shiota does not disclose expressly that said first information is used in color conversion to an absolute color space; and that said first image obtaining mechanism and said second image obtaining mechanism are included within said image generating apparatus.

Telle discloses converting colors from one color space to an absolute color space (figure 4(78) and column 5, lines 28-33 of Telle). RGB colors are converted to CIELab color space, which is generally considered an absolute color space since CIELab color space is linear with respect to human visual color tolerance errors (column 5, lines 57-62 of Telle).

Shiota and Telle are combinable because they are from the same field of endeavor, namely the control, processing and output of digital color image data signals. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to convert the colors of the input device into an absolute color space, as taught by Telle, using said first

information taught by Shiota. The motivation for doing so would have been that an absolute color space is based on human visual attributes rather than device attributes, and can therefore be used as a standard for conversion. Therefore, it would have been obvious to combine Telle with Shiota.

Shiota in view of Telle does not disclose expressly that said first image obtaining mechanism and said second image obtaining mechanism are included within said image generating apparatus.

Kondo discloses an image processing unit (figure 1(14) of Kondo) which is used to obtain information for faithfully reproducing a color of a subject and information for specifying image quality adjustment, including reproduction characteristics of a predetermined output apparatus (column 4, lines 31-42 of Kondo).

Shiota in view of Telle is combinable with Kondo because they are from the same field of endeavor, namely digital image data processing and reproduction. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use a single processor to obtain the information for faithfully reproducing a color of a subject and the information for specifying image quality adjustment, including reproduction characteristics of a predetermined output apparatus, on a single processor, as taught by Kondo, said processor being the processor of the image data generation mechanism taught by Shiota in view of Telle. The processor would then only contain the data for one input device (figure 1(18a) of Kondo), namely itself, and a plurality of possible output devices (figure 1 (20a) of Kondo). The motivation for doing so would have been to provide for stability in the quality of reproduced images given

a plurality of different output devices (column 2, lines 26-36 of Kondo) by supplying the profiles of said output devices on said image data generating mechanism taught by Shiota in view of Telle. Therefore, it would have been obvious to combine Kondo with Shiota in view of Telle to obtain the invention as specified in claims 66 and 68.

Further regarding claim 68: The mechanisms of claim 66 provide the means of claim 68.

11. Claim 43 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shiota (US Patent 6,011,547) in view of Kondo (US Patent 6,281,992 B1) and Liu (US Patent 6,523,046 B2).

Regarding claim 43: Shiota discloses that the image process control data is stored at a specific portion (figure 1 (9,10) of Shiota) of the image file (figure 1(7) of Shiota) (column 5, lines 31-35 and lines 57-59 of Shiota), and said data retrieval mechanism retrieves said specific portion to obtain the image process control data (column 5, lines 54-59 of Shiota).

Shiota in view of Kondo does not disclose expressly that said specific portion is a Makernote portion of an Exif file.

Liu discloses using a Makernote portion of an Exif file to store property items (column 10, lines 17-21 of Liu).

Shiota and Liu are combinable because they are from similar problem solving areas, namely storing and using digital image data. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the Makernote portion of an Exif file format to store property items, as taught by Liu, said property items being the process data taught by Shiota. The suggestion for doing so would have been that an

Exif file, along with the corresponding Makernote portion, is simply one of many possible formats that one of ordinary skill in the art could select as an output file format (column 8, lines 4-9 of Liu). Therefore, it would have been obvious to combine Liu with Shiota in view of Kondo to obtain the invention as specified in claim 43.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Thompson whose telephone number is 571-272-7441. The examiner can normally be reached on 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on 571-272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James A. Thompson
Examiner
Art Unit 2624

16 September 2005

THOMAS D LEE
PRIMARY EXAMINER